Bimodal hearing fitting

Lakuš Ivanček, Maja; Sotirov, Bojan

Source / Izvornik: **16th Congress of European Federation of Audiology Societies: Abstract Book, 2023, 259 - 259**

Conference presentation / Izlaganje na skupu

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:257:816231






HRVATSKO DRUŠTVO ZA KOHLEARNU IMPLANTACIJU
CROATIAN SOCIETY FOR COCHLEAR IMPLANTATION

HRVATSKO DRUŠTVO ZA AUDIOLOGIJU I FONIJATRIJU
CROATIAN SOCIETY OF AUDIOLOGY AND PHONIATRICIANS

16th Congress of the European Federation of Audiology Societies

May 3-6, 2023

Amadria Park Convention Center
Šibenik, Croatia

www.efas2023.org

ABSTRACT BOOK

[Abstract:0251]

Bimodal hearing fitting

Maja Lakus Ivancek[1], Bojan Sotirov[2]

[1]Maja Lakuš Ivančeк, Poliklinika SUVAG, Zagreb, Croatia

[2]Bojan Sotirov, Studio PULSAR, Belgrade, Serbia

When taking into account of making hearing impaired patient's life easier and more efficient, it is necessary to solve problems as better as possible. Taking into consideration the type and the stage of hearing impairment, the patient becomes a recipient of either hearing aid(s), cochlear implant(s) or bone conduction implant(s). A hearing aid is a device that could be useful for moderate hearing loss, but its primary role is to make sounds louder from the outside, so they can't effectively treat more serious inner ear hearing loss. If there is a severe impairment within the sound-detecting hair cells in the cochlea, they do not respond efficiently to the amplified acoustic sounds from a hearing aid. In the case of progressive hearing loss, a cochlear implant could be a more effective treatment option. A cochlear implant uses tiny electrical pulses to bypass the non-working hair cells in the cochlea, where the implant signals are turned into nerve signals which than travel along the natural hearing pathways, through the auditory nerve - and to the brain. In the case of conductive or mixed hearing loss, outer or middle ear is damaged, so sounds cannot reach the inner ear effectively, then the patient could be a bone conduction implant recipient. picks up the sounds in the environment and then sends them directly to the inner ear through the bones of the skull, bypassing damaged outer and middle ear. When using bimodal hearing, the patient is using two types of devices - cochlear implant or bone conduction implant and hearing aid, which all work differently but work together. Bimodal hearing is very common when the patient is a candidate for bilateral cochlear implant, but they are often done sequentially, which means the surgery for each ear is done separately over several months or more. During the time period between first and second cochlear implant surgery, the patient keeps using his hearing aid in the non-implanted ear. There are many benefits of using bimodal hearing: binaural summation, squelch effect and the head shadow effect. When listening with both ears, there is significantly better speech understanding in noise, the patient has less listening effort, sound localization becomes better but the most important benefit for the patient is the reduction of social isolation and the improvement of quality of life. But every type of hearing device has a different strategy and rules when it comes to the fitting.

Keywords: bimodal hearing, fitting, hearing aids, cochlear implants, bone conduction implants